

## Simplifying Polynomials

**1** Are these “like” terms?

$x^2$  and  $x$

Yes

No

$5x$  and  $-3x$

Yes

No

**2** Are these “like” terms?

$2y$  and  $2x$

Yes

No

$3xy$  and  $4yx$

Yes

No

**3** Simplify.

$$4x^2 + 7 + 2x^2 + 3$$

$$6x^2 + 10$$

**4** Simplify.

$$12x^2 - 7 - 10x^2 + 4$$

$$2x^2 - 3$$

**5** Simplify.

$$-3x^2 + 4x^2 - 3x + 4x$$

$$x^2 + x$$

**6** Simplify.

$$-x^4 - x^4 + 7x + 5x - x + 3$$

$$-2x^4 + 11x + 3$$

**7** Simplify.

$$2x^3 + 5x^2 + 10x^2 + 20 + x^3$$

$$3x^3 + 15x^2 + 20$$

**8** Simplify.

$$x^3 - 5x^2 - 10x^3 + 8x + 9x^2$$

$$-9x^3 + 4x^2 + 8x$$

**9** Simplify.

$$xy + 3x + 8y - x + 5 - 2y$$

$$xy + 2x + 6y + 5$$

**10** Simplify. (Careful! This one is tricky.)

$$6yx + 3x^2y - 4y^2x + 2xy$$

$$3x^2y - 4xy^2 + 8xy$$